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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/070,721   | 07/16/2002  | Philip Hall          | THC.P.US0003        | 9695             |
| 7590   | 03/16/2004  |                      | EXAMINER            |                  |
| Andrew B Morton<br>Renner Kenner Greive BobakTaylor & Weber<br>First National Tower 4th Floor<br>Akron, OH 44308 |             |                      | CHORBAJI, MONZER R  |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1744                |                  |

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/070,721

Applicant(s)

HALL, PHILIP

Examiner

MONZER R CHORBAJI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/04/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 6-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Pellin (U.S.P.N. 4,102,654).

With respect to claims 1 and 6, Pellin discloses a method (columns 2-3) and an apparatus (figure) for purifying air including the following: withdrawing air from an enclosed space (col.3, lines 56-63) by using means (figure, 6), ducting (figure), passing the air over surfaces coated with an antimicrobial agent (col.2, lines 31-34), through UV radiation (col.2, lines 53-55), and returning the air to the enclosed space (figure, 3).

With respect to claims 2, 7, and 9, Pellin teaches filtering the withdrawn air (figure, 4) and the antimicrobial agent is coated on at least some of the internal surfaces of the filter (figure, 5 and col.2, lines 31-34).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pellin (U.S.P.N. 4,102,654) in view of Smith (WO 92/20974).

The teachings of Pellin have been previously set forth with regard to claims 1-2, 6-7, and 9. Regarding claim 10 such features have been previously addressed with respect to claim 9. However, with respect to claims 3 and 8, Pellin fails to disclose means for causing turbulence to the incoming airflow. Smith discloses means for causing turbulence to the incoming airflow (figure 6, 20 and 22). Thus, it would have been obvious to one having ordinary skill in the art to modify the method and apparatus of Pellin to include turbulence means to in order to achieve a substantially even redistribution of the velocity and pressure of the air stream in the transverse direction (abstract, lines 1-4).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pellin (U.S.P.N. 4,102,654) in view of Tsukahara et al (U.S.P.N. 4,876,070).

The teachings of Pellin have been previously set forth with regard to claims 1-2, 6-7, and 9. However, regarding claim 4, Pellin fails to disclose that the antimicrobial agent is a silane. Tsukahara et al discloses the use of silane (col.3, lines 7). Thus, it would have

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been obvious to one having ordinary skill in the art to modify the method of Pellin to include silane in order to strengthen the binding of the antimicrobial agent and the resin thereby preventing the antimicrobial agent from disappearing due to release over a short time (Tsukahara et al, col.3, lines 30-33).

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 8:30-5:00.
8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monzer R. Chorbaji  
Patent Examiner  
AU 1744  
03/05/2004

*MRC*

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